APPENDIX

A

THIS IS THE GENERAL LIST OF ARCONIUM ALLOYS. CUSTOM ALLOYS/FORMULATIONS ARE AVAILABLE TO SUIT YOUR SPECIAL REQUIREMENTS.

Ostalloy Number	Temperature °F Solidus		Temperature °F Liquidus	Temperature °C Solidus		Temperature °C Liquidus	Alloy	Density lb.in^{-3}	Density g.cm^{-3}
51	51	E	51	10.7	E	10.7	62.5 Ga, 21.5 In, 16 Sn	.2348	6.50
60	60	E	60	15.7	E	15.7	75.5 Ga, 24.5 In	.2294	6.35
117	117	E	117	47	E	47	44.7 Bi, 22.6 Pb, 19.1 In 8.3 Sn, 5.3 Cd	.3307	9.16
129133	129		133	54		56	49.3 Bi, 20.8 In, 17.9 Pb, 11.5 Sn, .5 Cd	.3253	9.01
134149	134		149	57		65	47.5 Bi, 25.4 Pb, 12.6 Sn, 9.5 Cd, 5 In	.3419	9.47
136	136	E	136	58	E	58	49 Bi, 21 In, 18 Pb, 12 Sn	.3253	9.00
136156	136		156	58		69	49 Bi, 18 Pb, 18 In, 15 Sn	.3249	9.00
142149	142		149	61		65	48 Bi, 25.7 Pb, 12.7 Sn, 9.6 Cd, 4 In	.3429	9.50
143	143	E	143	61.5	E	61.5	61.72 In, 30.78 Bi, 7.5 Cd	.2895	9.01
156158	156		158	68		69	52 Bi, 26 Pb, 22 In	.3450	
158	158	E	158	70	E	70	49.5Bi, 27.3Pb, 13.1Sn, 10.1Cd	.3458	9.58
158165A	158		165	70		73	50.5Bi, 27.8 Pb, 12.4Sn, 9.3 Cd	.3491	9.67
158173	158		173	70		78	50 Bi, 34.5 Pb, 9.3 Sn, 6.2 Cd	.3579	9.89
158194	158		194	70		90	42.5 Bi, 37.7 Pb, 11.3 Sn, 8.5 Cd	.3541	9.81
160190	160		190	71		88	42 Bi, 37 Pb, 12 Sn, 9 Cd	.3541	9.81
162	162	E	162	72	E	72	66.3 In, 33.7 Bi	.2886	7.99
165200	165		200	73		93	50 Bi, 39 Pb, 7 Cd, 4 Sn	.3650	10.11
170180	170		180	77		82	50 Bi, 39 Pb, 8 Cd, 3 Sn	.6570	10.13
171	171	E	171	77.5	E	77.5	48.5 Bi, 41.5 In, 10 Cd	.3066	8.49
178	178	E	178	81	E	81	54.1 Bi, 29.6 In, 16.3 Sn	.3058	8.47
178185	178		185	81		85	50.4 Bi, 39.2 Pb, 8 Cd, 1.4 In,1Sn	.3664	9.80
190200	190		200	87		93	51.45 Bi, 31.35 Pb, 15.2 Sn, 1 In	.3480	9.64
197	197	E	197	92	E	92	51.6 Bi, 40.2 Pb, 8.2 Cd	.3700	10.25
200	200	E	200	93	E	93	44In, 42 Sn, 14 Cd	.2693	7.46
200210	200		210	93		99	50 Bi, 31 Pb, 19 Sn	.3458	9.58
202	202	E	202	95	E	95	52 Bi, 30 Pb, 18 Sn	.3465	9.60
203204	203		204	95		95.5	52 Bi, 32 Pb, 16 Sn	.3500	9.69
203219A	203		219	95		104	56 Bi, 22 Pb, 22 Sn	.3382	9.37
203219B	203		219	95		104	50 Bi, 30 Pb, 20 Sn	.3440	9.53
203219C	203		219	95		104	46.1 Bi, 19.7 Pb, 34.2 Sn	.3270	9.06
203239	203		239	95		115	50 Bi, 25 Pb, 25 Sn	.3364	9.32
203264	203		264	95		129	51.6 Bi, 37.4 Sn, 6 In, 5 Pb	.3097	8.58
203277	203		277	95		136	36 Bi, 32 Pb, 31 Sn, 1 Ag	.3328	9.22
205225	205		225	96		107	45 Bi, 35 Pb, 20 Sn	.3465	9.60
205271	205		271	96		133	34 Pb, 34 Sn, 32 Bi	.3303	9.15
208221	208		221	98		105	52.2 Bi, 37.8 Pb, 10 Sn	.3599	9.97
208234	208		234	98		112	51.6 Bi, 41.4 Pb, 7 Sn	.3657	10.13
212	212	E	212	100	E	100	35.7 Sn, 35.7 Bi, 28.6 Pb	.3370	9.34
215226	215		226	102		108	54.5 Bi, 39.5 Pb, 6Sn	.3660	10.14
219	219	E	219	104	E	104	53.9 Bi, 25.9 Sn, 20.2 Cd	.3111	8.67
229	229	E	229	109	E	109	67 Bi, 33 In	.3180	8.81
242248	242		248	117		120	55 Bi, 44 Pb, 1 Sn	.3751	10.39
244	244	E	244	118	E	118	52 In, 48 Sn	.2635	7.30
244257	244		257	118		125	50 In, 50 Sn	.2635	7.30
244268	244		268	118		131	52 Sn, 48 In	.2635	7.30
244293	244		293	118		145	58 Sn, 42 In	.2635	7.30
248250	248		250	120		121	55 Bi, 44 Pb, 1 In	.3751	10.38
248266	248		266	120		130	40 In, 40 Sn, 20 Pb	.2837	7.86
248306	248		306	120		152	42 Pb, 37 Sn, 21 Bi	.3307	9.16

E = *Eutectic*

Ostalloy Number	Temperature °F Solidus		Liquidus	Temperature °C Solidus		Liquidus	Alloy	Density lb. in^{-3}	g. cm^{-3}
250277	250		277	121		136	55.1 Bi, 39.9 Sn, 5 Pb	.3130	8.67
253	253	E	253	123	E	123	74 In, 26 Cd	.2751	7.62
255	255	E	255	124	E	124	55.5 Bi, 44.5 Pb	.3769	10.44
255259	255		259	124		126	58 Bi, 42 Pb	.3754	10.40
257		MP	257		MP	125	70 In, 15 Sn, 9.6 Pb, 5.4 Cd	.2754	7.63
257302	257		302	125		150	95 In, 5 Bi	.2673	7.40
262269	262		269	128		132	75 In, 25 Sn	.2720	7.30
262271	262		271	128		133	56.84 Bi, 41.16 Sn, 2 Pb	.3105	8.60
266343	266		343	130		173	50 Pb, 30 Sn, 20 Bi	.3419	9.47
268338	268		338	131		170	51.5 Pb, 27 Sn, 21.5 Bi	.3458	9.58
268375	268		375	131		190	80 In, 20 Sn	.2710	7.30
270282	270		282	132		139	45 Sn, 32 Pb, 18 Cd, 5 Bi	.3115	8.63
275		MP	275		MP	135	57.4 Bi, 41.6 Sn, 1 Pb	.3097	8.58
281	281	E	281	138	E	138	58 Bi, 42 Sn	.3090	8.56
281299	281		299	138		148	50 Bi, 50 Sn	.2970	8.23
281333	281		333	138		167	43 Bi, 57 Sn	.2960	8.16
281338	281		338	138		170	60 Sn, 40 Bi	.2931	8.12
284324	284		324	140		162	48 Sn, 36 Pb, 16 Bi	.3170	8.78
291	291	E	291	144	E	144	60 Bi, 40 Cd	.3361	9.31
291295	291		295	144		163	90 In, 10 Sn	.2710	7.51
291325	291		325	144		163	43 Pb, 43 Sn,14 Bi	.3245	8.99
293	293	E	293	145	E	145	51.2 Sn, 30.6 Pb, 18.2 Cd	.3050	8.45
293325	293		325	145		162	75 In, 25 Pb	.2830	7.84
296	296	E	296	146	E	146	97 In, 3 Ag	.2664	7.38
298300	298		300	148		149	80 In, 15 Pb, 5 Ag	.2834	7.85
307A		MP	307		MP	153	99.5 In, .5 Ga	.2639	7.31
307322	307		322	153		161	70 Sn, 18 Pb, 12 In	.2812	7.79
313		MP	313		MP	156.7	100 In	.2639	7.31
320345	320		345	160		174	70 In, 30 Pb	.2956	8.19
338	338	E	338	170	E	170	65.5 Sn, 31.5 Bi, 3.0 In	.2901	8.03
345365	345		365	174		185	60 In, 40 Pb	.3077	8.52
348	348	E	348	176	E	176	67.8 Sn, 32.2 Cd	.2772	7.68
355	355	E	355	179	E	179	62 Sn, 36 Pb, 2 Ag	.3036	8.41
355410	355		410	179		210	55 Pb, 44 Sn, 1 Ag	.3289	9.10
355450	355		450	179		232	60 Pb, 37 Sn, 3 Ag	.3390	9.39
355500	355		500	179		260	50 Sn, 47 Pb, 3 Ag	.3198	8.86
356408	356		408	180		209	50 In, 50 Pb	.3198	8.86
361	361	E	361	183	E	183	63 Sn, 37 Pb	.3032	8.40
361367	361		367	183		186	70 Sn, 30 Pb	.2946	8.16
361370	361		370	183		188	60 Sn, 40 Pb	.3068	8.50
361378	361		378	183		192	75 Sn, 25 Pb	.2888	8.00
361390	361		390	183		199	80 Sn, 20 Pb	.2834	7.85
361403	361		403	183		205	85 Sn, 15 Pb	.2780	7.70
361413	361		413	183		212	50 Sn, 50 Pb	.3202	8.87
361415	361		415	183		213	90 Sn, 10 Pb	.2726	7.55
361432	361		432	183		222	95 Sn, 5 Pb	.2679	7.42
361460	361		460	183		238	60 Pb, 40 Sn	.3350	9.28
361496	361		496	183		257	70 Pb, 30 Sn	.3509	9.72
361514	361		514	183		268	75 Pb, 25 Sn	.3595	9.96
380450	380		450	193		232	65 Pb, 35 In	.3420	9.47
383437	383		437	195		225	60 Pb, 40 In	.3350	9.30
390	390	E	390	199	E	199	91 Sn, 9 In	.2626	7.27
422	422	E	422	217	E	217	90 Sn, 10 Au	.2730	7.30

E = Eutectic

Ostalloy Number	Temperature °F Solidus		Liquidus	Temperature °C Solidus		Liquidus	Alloy	Density lb.in^{-3}	g.cm^{-3}
430	430	E	430	221	E	221	96.5 Sn, 3.5 Ag	.2657	7.36
430448	430		448	221		238	96 Sn, 4 Ag	.2640	7.31
430465	430		465	221		240	95 Sn, 5 Ag	.2668	7.39
430563	430		563	221		295	90 Sn, 10 Ag	.2711	7.51
450		MP	450		MP	232	100 Sn	.2628	7.28
450456	450		456	232		235	98 Sn, 2 Sb	.2690	7.45
450464	450		464	232		240	95 Sn, 5 Sb	.2617	7.25
451		MP	451		MP	233	65 Sn, 25 Ag, 10 Sb	.2818	7.80
463470	463		470	239		243	85 Pb, 10 Sb, 5 Sn	.3820	10.58
463545	463		545	239		285	92 Pb, 5 Sn, 3 Sb	.3906	10.82
482508	482		508	250		264	75 Pb, 25 In	.3599	9.97
486500	486		500	252		260	90 Pb, 10 Sb	.3826	10.60
514570	514		570	268		299	88 Pb, 10 Sn, 2 Ag	.3887	10.77
518536	518		536	270		280	81 Pb, 19 In	.3707	10.27
520		MP	520		MP	271	100 Bi	.3541	9.80
522603	522		603	273		316	96 Pb, 4 Sn	.3930	10.87
524564	524		564	274		296	95 Bi, 5 Sb	.3445	9.54
527576	527		576	275		302	90 Pb, 10 Sn	.3881	10.75
529553	529		553	277		290	85 Pb, 15 In	.3795	10.51
536	536	E	536	280	E	280	80 Au, 20 Sn	.5242	14.51
536558	536		558	280		292	90 Pb, 10 In	.3870	10.72
549565	549		565	287		296	92.5 Pb, 5 Sn, 2.5 Ag	.3978	11.02
554590	554		590	290		310	90 Pb, 5 In, 5 Ag	.3971	11.00
558		MP	558		MP	292	90 Pb, 5 Ag, 5 Sn	.3971	11.00
558598	558		598	292		314	95 Pb, 5 In	.3980	11.06
570580	570		580	299		304	95.5 Pb, 2.5 AG, 2 Sn	.4043	11.20
572		MP	572		MP	300	92.5 Pb, 5 In, 2.5 Ag	.3978	11.02
579	579	E	579	303	E	303	97.5 Pb, 2.5 Ag	.4090	11.33
581687	581		687	305		364	95 Pb, 5 Ag	.4079	11.30
588	588	E	588	309	E	309	97.5 Pb, 1.5 Ag, 1 Sn	.4072	11.28
590598	590		598	310		314	95 Pb, 5 Sn	.3980	11.06
590611	590		611	310		322	98.5 Pb, 1.5 Sb	.4054	11.23
597		MP	597		MP	313	91 Pb, 4 Sn, 4 Ag, 1 In	.4060	11.24
620		MP	620		MP	327	100 Pb	.4090	11.35

E = Eutectic
MP = Melting Point

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